U.S. Department of Transportation
United States Coast Guard

Commandant
U.S. Coast Guard

2100 Second Street, S.W.
Washington, DC 20593-0001
Staff Symbol: G-MSO-3
Phone: (202) 267-1577

COAST GUARD SPECIAL PERMIT 1-92

This Special Permit is issued pursuant to 46 CFR 148.01-9 of the U.S. Coast Guard (USCG) Carriage of Solid Hazardous Materials in Bulk Regulations to authorize bulk shipments of Direct Reduced Iron (DRI) pellets, lumps and cold molded briquettes under conditions as described herein. This permit does not relieve any shipper or carrier from compliance with any applicable requirement of 46 CFR 148 of the USCG Regulations, except as specifically provided for herein.

1. **BASIS** - American Commercial Barge Line, LLC letter of March 7, 2000.
2. **COMMODITY** - Direct Reduced Iron (DRI) pellets, lumps, and cold molded briquettes.
3. **PROPER SHIPPING NAME** - DIRECT REDUCED IRON (DRI).
4. **REGULATION WAIVED OR AFFECTED** - 46 CFR 148.01-7.
5. **AUTHORIZED HOLDERS** – American Commercial Barge Line, LLC, PO Box 610, Jeffersonville, Indiana 47131.
6. **MODE OF TRANSPORTATION AUTHORIZED** - Cargo Vessels and Unmanned Covered Barges.
7. **CLASSIFICATION** - IMO: Material Hazardous Only in Bulk.
8. **PROPERTIES** -DRI may react with water and air to produce hydrogen and heat. The heat produced may cause ignition. Oxygen in enclosed spaces may be depleted. Description:
   (1) Cold molded briquettes are those which have been molded at a temperature of less than 640°C (1184°F) or which have a density of under 5.0 g/cm3. The approximate maximum dimensions of cold molded DRI are 35 mm to 40 mm.
   (2) DRI lumps and pellets have an average particle size of 6 mm to 25 mm with up to 5% fines (under 4 mm).
9. **SPECIAL TRANSPORTATION REQUIREMENTS** -
   a. General:
      (1) The DRI must be loaded and unloaded at a designated waterfront facility that meets the requirements of 33 CFR 126.05(a) or a midstream anchorage acceptable to the cognizant Coast Guard Captain of the Port.
      (2) The cognizant Coast Guard Captain of the Port must be informed at least 24 hours in advance of loading or unloading operations.
      (3) The loading operations must be supervised by a person familiar with the safety precautions and emergency procedures associated with handling DRI. The

loading operators must be trained in the appropriate safety precautions and emergency procedures for handling DRI.

(4) The shipper shall provide the master of the vessel or the person in charge of the tug or towing vessel with information on the safety precautions and emergency procedures associated with the shipment of DRI.

(5) The shipper shall certify that the material conforms with the requirements of this special permit and the IMO Code of Safe Practice for Solid Bulk Cargoes, including the limitation of the amount of fines (less than 4 mm) to 5%.

(6) Prior to shipment, the DRI shall be aged for at least 72 hours, or treated with an air passivation technique, or some other equivalent method that reduces the activity of the DRI to at least the level of the aged product.

(7) DRI must be protected at all times from contact with water. Except as provided for in paragraph 9.b(1)(ii), DRI which is wet or known to have been wetted must not be accepted for carriage. DRI shall not be loaded or transferred from one vessel or barge to another during periods of rain or snow. Unloading under all weather conditions is acceptable.

(8) DRI should not be loaded if the product temperature is in excess of 65°C (150°F).

(9) DRI shall be loaded in such a manner as to avoid a concentration of fines in localized areas in the cargo.

(10) No smoking, burning, cutting, chipping or other source of ignition shall be allowed near cargo spaces containing DRI or on or near barges containing DRI.

(11) Before DRI is loaded, holds shall be as dry and clean as reasonably practicable, and free of residues of previous cargoes, loose dunnage, debris and combustible material of any kind.

(12) Precautions must be taken to prevent the penetration of hydrogen gas into adjacent cargo compartments, voids, bilges, and wells, and behind ceiling boards.

(13) After loading, the hatches must be closed at all times until the DRI is unloaded, except as provided in paragraph 9.c(2).

(14) Before any person enters a hold of a vessel or the cargo compartment of a barge containing DRI, it must be checked with an oxygen monitor to determine that there is an adequate oxygen concentration (See also paragraphs 9.b(7) and 9.c(2)).

(15) During unloading, a fine spray of fresh water may be used to control dust.

(16) Each bill of lading, shipping order, or other shipping paper issued in connection with DRI under the terms herein, must bear the notation "USCG Special Permit 1-92."

b. Cargo Vessels:

(1) The shipper shall provide the master of the vessel with necessary specific information for the carriage of DRI, which shall include either:

(i) Instructions to maintain throughout the voyage an inert atmosphere containing less than 5% oxygen in the cargo holds, with a hydrogen content of less than 1% by volume; or

(ii) Assurance that the DRI has been manufactured or treated with an oxidation and corrosion inhibiting process which has been proven, to the satisfaction of the competent authority of the country of shipment, to provide effective protection against dangerous reaction with seawater or air under the shipping conditions.

(2) The master of the vessel shall have a certification in writing issued by a competent person recognized by the National Administration of the country of shipment stating that the DRI, at the time of loading, is suitable for shipment.

(3) Bilges must be kept dry during the voyage. Where possible, adjacent ballast tanks, other than double bottom tanks, must be kept empty. Wooden fixtures such as battens, etc. shall be removed. Weatherdeck closures shall be inspected and tested to ensure integrity.

(4) Boundaries of compartments where bulk DRI is carried should be resistant to fire and the passage of water.

(5) Except for holds inerted in accordance with paragraph 9.b(1)(i) above, adequate surface ventilation must be provided.

(6) DRI must be stowed separated from packaged hazardous cargoes which are classified as Class/division 1.4S (explosive substances or articles which present no significant hazard), Class 2 (flammable, poisonous, and nonflammable gases), Class 3 (flammable liquids), Class 4 (flammable solids and materials which are spontaneously combustible and materials which are dangerous when wet), Class 5 (oxidizers and organic peroxides), and Class 8 (corrosives - acids only); and separated from bulk solid materials of Classes 4 and 5. [Note: "separated from" is defined in Sections 9.3.3 and 9.3.4 of the IMO Code of Safe Practice for Solid Bulk Cargoes.]

(7) The master of the vessel shall ensure that the holds containing DRI are monitored for the presence of oxygen and hydrogen at regular intervals, and that a record of this monitoring is kept on board the vessel. The instruments used for this purpose must be suitable for use in an inert atmosphere (See also paragraph 9.a(14)).

(8) If at any time a hold containing DRI must be entered, it must be ventilated for a sufficient length of time to dissipate any accumulated gases (See also paragraph 9.a(14)).

(9) During loading and discharging operations, radar and RDF scanners must be adequately protected against dust.

(10) A copy of this permit must be on board the cargo vessel when transporting DRI.

c. Unmanned Barges:

(1) The unmanned covered barges used to transport DRI shall be fitted with vents adequate to provide natural ventilation.

(2) If at any time a cargo compartment of a barge containing DRI must be entered, the hatch covers must be opened for a sufficient length of time to dissipate any accumulated gases (See also paragraph 9.a(14)).

(3) After unloading, the barge shall be cleaned thoroughly before loading a different cargo.

(4) When DRI is transported by barge, a copy of this permit must be on board the tug or towing vessel. When the barge is moored, the shipping paper and a copy of this Special Permit must remain on the barge in a suitable protected location.

10. **REPORTING REQUIREMENTS** - Any incident or casualty occurring while shipping under the terms of this permit shall be reported in accordance with 49 CFR 171.15, and a copy of the written report forwarded to the Commandant (G-MSO-3), U.S. Coast Guard, 2100 Second Street, SW, Washington, DC 20593-0001 at the earliest practicable moment. In addition, a record of experience under the terms of this special permit including any casualties or difficulties encountered must be sent to the Commandant (G-MSO-3) upon request for renewal.

11. **EXPIRATION DATE** - April 30, 2004.

Authorized by:

April 21, 2000

R. F. CORBIN
Commander, U.S. Coast Guard
Chief, Hazardous Materials Standards Division
By direction of the Commandant

DATE